

REMARKS

Claims 1-18, 43, and 44 are pending in the present application. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 112, First Paragraph

The examiner has rejected claims 1-18, 43, and 44 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. This rejection is respectfully traversed.

Examiner states,

The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification does not state only one start record and only one stop record are sent for a plurality of short data burst transmissions. It is further unclear what this start and stop record is incorporating. Is this a data packet transmission that would inherently incorporate records?

Applicant respectfully submits that the claims are enabled by the specification, and specifically that the specification does in fact state that only one start record and only one stop record are sent for a plurality of short data burst transmissions. For example, the specification states at page 2, lines 7-13 in the Summary of the Invention:

The method and apparatus are capable of accumulating accounting information for short data bursts and for active traffic channel transmissions such that an accounting message is sent to an accounting server only when transitions from short data burst transmissions or active traffic channel transmission to another state are encountered. Thus, accounting information for a plurality of short data bursts and/or active traffic channel transmissions are accumulated.

This passage describes accumulating accounting information for short data bursts. The way in which this is accomplished is described in the detailed description, specifically in

Figures 9 and 10, which describe the messages sent when a start and stop record are sent for each SDB to the accounting server (Figure 9), and the messages sent when SDB accounting information is accumulated for a plurality of SDBs (Figure 10). Part of the text of Figure 10 is hereby reproduced for reference (p. 19, line 20-p. 20, line 9 of the specification):

Transmission of data to the mobile station is then over an active traffic channel until the mobile station goes dormant. At this time, an active stop airlink record is sent from the wireless communication network to the accounting controller. The accounting controller sends a stop record to the accounting server identifying the number of SDBs, total number of SDB octets and the octet count. This information is sent again since the stop record must be cumulative and contain all the information since the start record. In other words, the start record opens an accounting entry and the stop record reports all the final counts. The total number of SDBs, SDB octets and the octet count are then cleared (Tn).

Thus, with the present invention, the number of messages sent to the accounting server is minimized by accumulating short data burst information over an interval containing a plurality of short data bursts. Thus, rather than sending eight accounting messages to the accounting server in the above example, only four messages are sent, thereby reducing the number of required accounting messages to half. In addition, the race condition that may be encountered when sending accounting messages for each short data burst are eliminated due to the accumulation of short data burst information over a time interval. The time interval in this example is the period starting with the first short data burst and ending when data transmission over an active traffic channel is started.

[Emphasis added.]

Though this is only part of the lengthy discussion of Figure 10, the recited passage includes description relevant to Examiner's concern for enablement of the claims. Particularly, the specification teaches that a start record opens an accounting entry while the stop record reports all the final counts. This allows accumulation of short data burst information and reduction of messages that must be sent.

As for Examiner's statement that it is unclear what the start record and stop record incorporate, it is respectfully submitted that these terms are described in the specification. For example, Figures 5 and 6 describe start and stop airlink records, respectively (p.12, lines 1-28):

Figure 5 is an exemplary table diagram of the parameters that make up an active start airlink record. As shown in Figure 5, the active start airlink record includes an airlink record type 505, a session identifier 510, a user zone 515, a forward Mux option 520, a reverse Mux option 525, a forward fundamental rate 530, a reverse fundamental rate 535, and a service option 540, a forward traffic type 545, a reverse traffic type 550, a fundamental frame size 555, a forward fundamental RC 560, a reverse fundamental RC 565 and an airlink quality of service 570. The airlink record type 505 identifies which type of airlink record it is (start, stop, SDB, connection setup, connection release). The session identifier 510 is a unique identifier for each wireless network-data network connection. The other parameters 515-565 are all defined parameters in standard TIA/EIA-2000 available from the Telecommunication Industry Association/Electronics Industry Association. The airlink quality of service 570 has 16 levels of priority values designated various levels of quality of service. These 16 levels of priority can also be found in standard TIA/EIA-2000. The active start airlink record informs the accounting controller 240 of the start of data transmission across the traffic channel.

Figure 6 is an exemplary table diagram illustrating the parameters of an active stop airlink record. As shown in Figure 6, the active stop airlink record includes an airlink record type 610, a session identifier 620 and an active connection time in seconds 630. The airlink record type 610 identifies the airlink record as an active stop airlink record. The session identifier 620 identifies the session. The active connection time in seconds 630 informs the accounting controller 240 of the number of seconds the traffic channel was active with data from the session.

In addition to transmitting data over the traffic channels in a normal operation as handled by the above start and stop airlink records, data may be transmitted as short data bursts (SDBs). A short data burst is a burst of data that lasts for a very short time rather than a consistent stream of data and is sent over common traffic channels instead of dedicated traffic channels as specified in TIA/EIA-2000.

Hence, Applicant respectfully submits that these terms are described in the specification sufficient to enable one of ordinary skill in the art to understand how to make and/or use the invention, and to apprehend the scope of the claims.

Section 112 requires that an applicant provide an enabling disclosure of his or her invention. Specifically, the disclosure must teach a person of ordinary skill in the art how to make and use the invention without undue experimentation. In the disclosure, however, the applicant need not teach what is well known in the art. *Lindemann Maschinenfabrik GMBH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 U.S.P.Q. 481 (Fed. Cir. 1984); *Staehelin v. Secher*, 24 U.S.P.Q.2d 1513, 1516 (Bd. Pat. App. &

Int. 1992). In fact a patent preferably omits what is well known in the art. *Spectra-Physics, Inc. v. Coherent, Inc.*, 827 F.2d 1524, 3 U.S.P.Q.2d 1737 (Fed. Cir. 1987).

Hence, it is respectfully submitted that the terms "airlink stop and stop records" have been described such that the specification is enabling to one of ordinary skill in the art.

Therefore, the objection of the specification under 35 U.S.C. § 112, first paragraph has been overcome.

### III. 35 U.S.C. § 103, Obviousness

The examiner has rejected claims 1-18, 43, and 44 under 35 U.S.C. § 103 as being unpatentable over Bullard et al. (USPN 6405251) in view of Monte et al. (USPN 6023606). This rejection is respectfully traversed.

In rejecting the claims, Examiner states:

Bullard et al. discloses the claimed method to optimize accounting records in a packet data network and discusses accounting records for "a mobile user" (column 4, line 52) but is unclear if this applies to a wireless packet data network. Monte et al. discloses that it is known in the art to provide a wireless packet data network in order to track billing for accounting for satellite communications system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the method of Bullard et al. with the wireless packet data network of Monte et al. in order to provide accounting for satellite communications systems.

Bullard et al. discloses detecting a communication link has been established between a mobile terminal and a host in a packet data network; and accumulates at a node accounting information relating to a communication network serving a mobile terminal and the packet data network, the accounting information being used by service providers to generate billing data; where only one start and one stop record are sent to the accounting server for a plurality of short data burst transmissions (see columns 7 and 8 and table 1 regarding start and stop records).

Claim 1 is reproduced for reference:

1. A method to optimize accounting records in a wireless/packet data network, comprising the steps of:

detecting that a communication link has been established between a mobile terminal and a host in a packet data network; and

accumulating, at a packet data serving node disposed between the mobile terminal and the packet data network, accounting information relating to a wireless communication network serving the mobile terminal and the packet data network, the accounting information being used by service providers to generate billing data to minimize the frequency of producing accounting records by the packet data serving node;

wherein only one start record and only one stop record are sent to the accounting server for a plurality of short data burst transmissions.

1. Neither reference addresses the problem addressed by the present invention, and combining them would not produce the present invention nor make it obvious to one of ordinary skill in the art.

Applicant respectfully submits that neither reference addresses the problem addressed by the present invention, and further that combining them would not produce the present invention nor make it obvious to one of ordinary skill in the art.

The present invention is directed to performing accounting of usage of wireless communication links to obtain access to a data network, and to merge accounting records for traffic flow between the wireless communication networks and data packet switched networks. Thus the claims recite, "accumulating, at a packet data serving node disposed between the mobile terminal and the packet data network, accounting information relating to a wireless communication network serving the mobile terminal and the packet data network", and "wherein only one start record and only one stop record are sent to the accounting server for a plurality of short data burst transmissions". Applicants therefore do not agree that the cited references teach or suggest these limitations.

It is respectfully submitted that neither reference addresses the problem addressed by the present invention. For example, Monte is a "method and system for accurately accounting for an amount of satellite communications system resources that are allotted to and utilized by a user terminal on a per call or connection basis." (*See Abstract.*)

Likewise, Bullard is directed to "A system for collecting and aggregating data from network entities for a data consuming application...." Hence, neither reference addresses the problem of the present invention, recited above.

Accordingly, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated, at the time of the invention, to combine the proposed references in the manner suggested by Examiner, because neither reference is directed to the same problem as the present application. In determining obviousness, an applicant's teachings may not be read into the prior art. *Panduit Corp. v. Denison Mfg. Co.*, 810 F.2d 1561, 1575 n. 29, 1 U.S.P.Q. 1593, 1602 n. 29 (Fed. Cir. 1987) (citing need to "guard against hindsight and the temptation to read the inventor's teachings into the prior art"). A determination of the desirability of combining prior art references must be made without the benefit of hindsight afforded by an applicant's disclosure. *In re Paulsen*, 30 F.3d 1475, 1482, 31 U.S.P.Q. 1671, 1676 (Fed. Cir. 1994).

Therefore, Applicants respectfully submit that the combination proposed by Examiner is improper.

**2. The cited references do not teach all limitations of the current claims.**

Applicant respectfully submits that the references, even if they were properly combined, do not teach nor suggest all the limitations of the claimed invention. For example, Examiner recites Bullard as teaching, "where only one start and one stop record are sent to the accounting server for a plurality of short data burst transmissions (see columns 7 and 8 and table 1 regarding stop and start records.)"

Applicant respectfully submits that the cited reference does not appear to mention short data burst transmissions. As mentioned above, Bullard is concerned not with merging accounting records from wireless and packet networks, but with general network accounting.

Columns 7 and 8, generally cited by Examiner as teaching the accumulation of short data burst (SDB) transmissions, do not appear to teach or suggest SDBs. Though column 7 mentions sending a start record, capturing multiple network accounting records (NARs), and sending a stop record, it does not describe the claimed limitation of,

"wherein only one start record and only one stop record are sent to the accounting server for a plurality of short data burst transmissions," as claimed in claim 1. Figure 6 of Bullard shows a RADIUS Start NAR 137a, and a RADIUS stop NAR 137e. Between them there is shown "E-mail NAR, 137b, HTTP NAR, 137c, and FTP NAR, 137d". Though these are general network usage parameters, they are not described as short data bursts. Applicant respectfully submits that the general accumulation of information on a network for monitoring usage would not make obvious the claim limitation of, "wherein only one start record and only one stop record are sent to the accounting server for a plurality of short data burst transmissions."

Likewise, Examiner has not specifically addressed several other limitations of the present claims. For example, also in claim 1, there is the limitation of, "accumulating, at a packet data serving node disposed between the mobile terminal and the packet data network, accounting information relating to a wireless communication network serving the mobile terminal and the packet data network, the accounting information being used by service providers to generate billing data to minimize the frequency of producing accounting records by the packet data serving node." as claimed. [Emphasis added.] Since neither reference is directed to the merger of accounting records for the two types of networks, it is respectfully submitted that the mere combination of a satellite network and a packet network does not teach the merger of accounting data for those two networks, and more particularly it does not teach generating billing data to minimize the frequency of producing accounting records by the packet data serving node. Applicant does not find such teaching in either reference, nor does Examiner specifically address this limitation in the final Office action.

Therefore, Applicant respectfully submits that the rejection of all claims over Bullard and Monte has been overcome. Favorable reconsideration of the claims is respectfully requested.

**III. Conclusion**

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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